WO 2005/032139

Claims

5

20

- 1. A method of signalling in a communications network in which service information data is transmitted via a first set of channels, the method comprising: providing a copy of at least some of said service information data; providing forward error correction (FEC) data for said copy; and transmitting said copy and said FEC data via a second, different set of channels.
- 10 2. A method according to claim 1, wherein transmitting said copy and said FEC data comprises:

transmitting said copy via a first sub-set of channels and transmitting said FEC data also on said first sub-set of channels.

- 15 3. A method according to claim 1 or 2, wherein said second set of channels comprise a single channel.
 - 4. A method according to any preceding claim, wherein said copy of said at least some of said service information data comprises a first plurality of data packets and said FEC data comprises a second plurality of data packets and wherein the method further comprises:

placing said first plurality of data packets in a first plurality of sections and placing said second plurality of data packets in a second plurality of sections.

- 25 5. A method according to claim 4, further comprising:

 arranging said first plurality of sections into a first set of bursts and

 arranging said second plurality of sections into a second set of bursts.
- 6. A method according to claim 4 or 5 further comprising:

 placing said first plurality of sections in a first plurality of packets and placing said first plurality of sections in a second plurality of packets.

25

- 7. A method according to claim 6, further comprising:
 labelling said first plurality of packets with a first packet identifier and
 labelling said second plurality of packets with a second packet identifier.
- 5 8. A method according to any one of claims 5 to 7, comprising:

 providing a first parameter for indicating a timing offset between a first,
 earlier burst comprising at least some of said copy of said at least some of said
 service information data and a second, later burst comprising further of said copy of
 said at least some of said service information data; and

providing a second parameter for indicating a timing offset between a third, earlier burst comprising at least some of said FEC data and a fourth, later burst comprising further FEC data.

- A method according to claim 8, further comprising:
 placing said first parameter in a section included in said first burst and placing said second parameter in a section included in said second burst.
- 10. A method according to any preceding claim, further comprising: including in said service information a parameter for indicating that said copy is being transmitted via second channel.
 - 11. A method according to any preceding claim, further comprising:
 including in said service information a parameter for indicating that said
 FEC data is being transmitted via third channel.
 - 12. A method according to any preceding claim, further comprising:
 including in said service information a parameter for indicating that said
 copy is being transmitted in a set of time-sliced bursts.
- 30 13. A method according to any preceding claim, further comprising: including in said service information a parameter for indicating that said FEC data is being transmitted in a set of time-sliced bursts.

25

30

- 14. A method according to any preceding claim, wherein said communications network is a unidirectional, digital broadcast system.
- 15. A method according to any preceding claim, comprising providing a copy of at least some other part of said service information data and transmitting said copy of said at least some other part of said service information data via said second, different set of channels.
- 16. A method according to any preceding claim, wherein said at least part of said service information comprises at least part of least some PSI/SI data table sections and/or at least part of at least some SI data table sections.
- 17. A method according to any preceding claim, comprising:
 transmitting part of said service information data as part of forward error
 correction data.
 - 18. A method of signalling in a communications network in which service information data is transmitted via a first set of channels, the method comprising providing a first copy of a first part of said service information data providing forward error correction (FEC) data for said copy,

providing a second copy of a second part of said service information data and

transmitting said first copy and said FEC data and said second copy via a second, different set of channels.

19. A method of signalling in a communications network in which service information data is transmitted, the method comprising:

providing forward error correction (FEC) data for at least some of said service information data; and

transmitting said at least some of said service information data and said FEC data.

15

20

25

- 20. A method according to claim 19, comprising:

 transmitting said service information data via a first set of channels; and

 transmitting said at least some of said service information data and said FEC

 data via a second, different set of channels.
- 21. A method of transmitting service information, the method comprising:

 transmitting at least part of service information data as part of forward error correction data.
- 10 22. A method according to claim 21, wherein the service information data includes service information parameters.
 - 23. A computer program comprising computer program instructions for causing data processing apparatus to perform the method according to any preceding claim.
 - 24. A method of operating a terminal configured to receive service information transmitted via a first set of channels, the method comprising:

receiving a copy of at least some of said service information data and FEC data for said copy via a second, different set of channels.

- 25. A method according to claim 24, comprising decoding said copy of at least some of said service information data and said FEC data for said copy so as to so produce a corrected version of said copy of said at least some of said service information data.
- 26. A method according to claim 24 or 25, comprising receiving a copy of at least some other part of said service information and which does not have FEC data via said second, different set of channels.
- 30 27. A method of operating a terminal configured to receive service information, the method comprising:

receiving at least some service information data and FEC data for said at least some service information data.

20

- 28. A method according to claim 27, comprising:

 receiving service information data via a first set of channels; and
 receiving said at least some service information data and FEC data for said at

 least some service information data via a second, different set of channels.
 - 29. A method of receiving service information, the method comprising: receiving at least part of service information data as part of forward error correction data.
 - 30. A computer program comprising computer program instructions for causing a terminal to perform the method according to any one of claims 24 to 29.
- 31. A system of signalling in a communications network in which service information is transmitted via a first set of channels, the method comprising: providing a copy of at least some of said service information data; providing forward error correction (FEC) data for said copy; transmitting said copy and said FEC data via a second, different set of channels.
 - 32. A system of signalling in a communications network in which service information data is transmitted, the system comprising:

providing forward error correction (FEC) data for at least some of said service information data; and

- 25 transmitting said at least some of said service information data and said FEC data.
- 33. A system according to claim 32, comprising:
 transmitting said service information data via a first set of channels; and
 transmitting said at least some of said service information data and said FEC
 data via a second, different set of channels.

15

20

25

30

- 34. A system of transmitting service information, the system comprising:
 transmitting at least part of service information data as part of forward error
 correction data.
- 5 35. A network element configured to signal service information via a first, set of channels, the network element comprising:

means for providing a copy of at least some of said service information data; means for providing forward error correction (FEC) data for said copy; means for transmitting said copy and said FEC data via a second, different set of channels.

36. A network element for signalling service information, the network element comprising:

means for providing forward error correction (FEC) data for at least some of said service information data; and

means for transmitting said at least some of said service information data and said FEC data.

- 37. A network element according to claim 36, configured to transmit service information data via a first set of channels and to transmit said at least some of said service information data and said FEC data via a second, different set of channels.
 - 38. A network element according to any one of claims 35 to 37, which is an encapsulator.
 - 39. A transmitter for signalling service information in a communications network, the transmitter comprising:

means for providing forward error correction (FEC) data for at least some service information data; and

means for transmitting said at least some of said service information data and said FEC data.

- 40. A transmitter according to claim 39, configured to transmit service information data via a first set of channels and to transmit said at least some of said service information data and said FEC data via a second, different set of channels.
- 5 41. A transmitter for signalling service information in a communications network, the transmitter comprising:

means for transmitting at least some of said service information data and said FEC data.

10 42. A terminal configured to receive service information transmitted via a first channel, comprising:

means for receiving a copy of at least some of said service information data and forward error correction (FEC) data for said copy via a second, different set of channels.

15

30

- 43. A terminal configured to receive service information, comprising:

 means for receiving at least some of service information data and forward
 error correction (FEC) data for said at least some of said service information.
- 44. A terminal according to claim 43, configured to receive service information data via a first set of channels and to receive said at least some of said service information data and said FEC data via a second, different set of channels.
- 45. A receiver for receiving service information, the receiver comprising:

 means for receiving forward error correction (FEC) data for at least part of transmitting part of service information data as part of forward error correction data.
 - 46. A receiver for receiving service information from a communications network, the receiver comprising means for receiving at least some of said service information as at least part of forward error correction (FEC) data.